PROCEEDINGS

OF THE

BIOLOGICAL SOCIETY OF WASHINGTON

DESCRIPTIONS OF FIVE NEW SHREWS FROM MEXICO, GUATEMALA, AND COLOMBIA.

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Blarina thomasi sp. nov.

Type from Plains of Bogota, Colombia (on G. O. Child's estate near City of Bogota, alt. about 9000 feet). Collected Nov. 14, 1895. Type in British Museum.

General characters.—Size large; coloration sooty-plumbeous. Similar to B. fossor, but fore feet very much smaller and molariform teeth not excavated posteriorily.

Color. -- Sooty plumbeous, darkest on the back.

Cranial and dental characters.—Skull and palate almost exactly as in B. fossor, but molariform teeth solid (not excavated posteriorly) and unicuspidate teeth with inner cusp behind instead of in front (on postero-internal instead of antero-internal angle).

Remarks.—For the opportunity to describe this very interesting shrew I am indebted to Mr. Oldfield Thomas, Curator of Mammals in the British Museum, who sent me seven specimens from the type locality. Heretofore the genus Blarina has not been recorded from any point south of Costa Rica; hence the discovery of the present species in South America is of unusual interest.

Measurements (from dry skin).—Total length, 110; tail vertebræ, 28; hind foot, 14.5; skull, 21 x 10.

Notiosorex gigas sp. nov.

Type from Mts. at Milpillas, near San Sebastian, Jalisco, Mexico. No. 88012, $\, \varphi \,$ ad. U. S. Nat. Mus., Biological Survey Coll. Collected March 15, 1897, by E. W. Nelson and E. A. Goldman. Original No. 10706.

General characters.—Similar to Notiosorex crawfordi, but very much larger; tail relatively as well as actually longer.

Color.—Uniform slate gray, slightly darker on rump and slightly paler

on under parts; belly with a faint brownish tinge; tail concolor with upper and lower surfaces of body.

Cranial and dental characters.—Skull large and massive, widely different from N. crawfordi and evotis; braincase highly arched, as in Blarina mexicana, which it greatly resembles (see figure of skull of B. mexicana, N. Am. Fauna, No. 10, pl. 1, fig. 11, Dec. 1895): constriction swollen; walls of anterior nares thickened; teeth white throughout, without trace of color on tips; molars swollen and crowded, not excavated posteriorly.

Remarks.—Mr. Nelson caught 3 specimens of this fine shrew near the creek, just below the mouth of the canyon, at Milpillas. He says they were living under shelter of logs, rocks, and banks in damp places grown up to bushes and weeds away from the woods.

Measurements (from dry skin*).—Total length, 128; tail vertebræ, 45; hind foot, 15. Cranial measurements: total length of skull, including incisors, 23; greatest breadth, 10.5.

Sorex sclateri † sp. nov.

Type from Tumbala, Chiapas, Mexico (alt., 5000 ft.). No. 75872, $\, \varphi \,$ ad. U. S. Nat. Mus., Department of Agriculture Coll. Collected Oct. 23, 1895, by E. W. Nelson and E. A. Goldman. Original No. 8567.

General characters.—Size large; tail long; hind foot very long (16 mm.); color similar to S. macrodon, but ears smaller, and skull very different.

Color.—Upper parts dusky, finely mixed with sepia brown, darkest over the rump; under parts seal brown; tail dusky; paler below, without line of demarkation; feet dusky.

Cranial and dental characters.—Skull large, long, and rather slender (20 x 9 mm.); rostrum, palate, and dentition (in general) much as in S. saussurei caudatus, but postpalatal region and braincase decidedly longer; interpterygoid fossa broad and long; first and second unicuspids subequal or second slightly the larger; third unicuspid, as seen from the side, decidedly larger than fourth; as seen from below, subequal or slightly smaller; teeth very white, the red tips greatly reduced.

Remarks.—Sorex sclateri is a very peculiar species, and does not seem to be at all closely related to any of the other shrews known from Mexico or Central America. The large size of the hind foot and peculiar elongation of the postpalatal part of the skull suffice to distinguish it from the species that approach it in size, while the relatively large size of the third unicuspidate tooth is distinctive. Singularly enough, in general form of skull and relative proportions of unicuspids Sorex sclateri resembles S. orcopolus, a small short-tailed species inhabiting the Sierra Nevada de Colima of Jalisco.

Measurements.—Type specimen: total length, 126; tail vertebræ, 52; hind foot, 16. Average of 5 specimens from type locality: total length, 125; tail vertebræ, 53; hind foot, 16.

^{*} Field measurements not yet received from collector.

[†] Named in honor of Dr. Philip Lutley Sclater, the distinguished Secretary of the Zoölogical Society of London.

Sorex salvini * sp. nov.

Type from Calel, Totonicapan, Guatemala (alt., 10200 ft. = 3100 meters). No. 77035, $\, \varphi \,$ ad. U. S. Nat. Mus., Department of Agriculture Coll. Collected Jan. 12, 1896, by E. W. Nelson and E. A. Goldman. Original No. 9057.

General characters.—Size small (about equalling S. ventralis); ears medium or rather large; tail rather short; belly very dark, thus differing from all the other known small species from either Mexico or Guatemala.

Color.—Upper parts rich dark sepia brown, darkest over the rump; under parts seal brown; tail faintly bicolor.

Cranial and dental characters.—Skull similar to that of ventralis, but somewhat larger (18.5 mm.); constriction of rostrum more swollen. First and second unicuspids subequal; third slightly larger than fourth as seen from the side, but really smaller as seen from below. Molariform teeth moderately excavated; larger than those of ventralis.

Remarks.—This small shrew seems to be more nearly related to ventralis than to any other. It is very much darker than ventralis, both above and below, has a slightly longer tail, larger skull, and larger molariform teeth.

Measurements.—Type specimen: total length, 104; tail vertebræ, 41; hind foot, 13 5. Average of two specimens from type locality: total length, 106; tail vertebræ, 42; hind foot, 13.75.

Sorex godmani * sp. nov.

Type from Volcano Santa Maria, Quezaltenango, Guatemala (alt., 9000 ft. = 2740 meters). No. 77044, $\ \varphi$ ad. U. S. Nat. Mus., Department of Agriculture Coll. Collected Jan. 28, 1896, by E. W. Nelson and E. A. Goldman. Original No. 9239.

General characters.—Size rather large (hind foot nearly 15 mm.); tail long; ears conspicuous; similar to S. caudatus, but color less dark and skull decidedly smaller.

Color.—Upper parts uniform dark sepia brown with a faint chestnut tinge; under parts seal brown; tail dark all round.

Cranial and dental characters.—Skull of normal shape (braincase somewhat flattened in type specimen), rather small for size of animal; first and second unicuspids subequal, third slightly smaller than fourth; molariform teeth rather deeply excavated posteriorly. Skull similar in general to that of caudatus but much smaller (18 x 8 mm. instead of 19.5×9.5); molariform teeth much smaller and more deeply excavated posteriorly.

Remarks.—Sorex godmani agrees with S. stizodon in color, but is larger, has a much longer tail (55 mm. instead of 41) and very different skull and

^{*}These two species are named in honor of Osbert Salvin and F. Du Cane Godman, the distinguished editors of the Biologia Centrali-Americana. Their names must ever be associated with the natural history of Guatemala.

teeth (skull more slender and delicate; pm and m ¹ and m ² much more deeply excavated posteriorly; second unicuspid *not* larger than first). Its nearest relative seems to be *S. saussurei caudatus*, which differs from it in somewhat darker coloration, in having the tail decidedly paler below, and in the cranial and dental peculiarities already described.

Measurements.—Type specimen: total length, 120; tail vertebræ, 57; hind foot, 15. Average of 4 specimens: total length, 122.5; tail verte-

bræ, 55; hind foot, 14.7.

Specimens examined.—Total number, 4, from the following localities in Guatemala:

Volcano Santa Maria, Quezaltenango (type locality), 3. Todos Santos, Huehuetenango, 1.